

The Dobbs Home in Encino

SUPERVISORIAL DISTRICT 3 RESIDENT

What It Cost

Many homeowners begin with a 20% energy savings target.

The Dobbs' upgrade included:



Cost-effective upgrades projected to achieve at least **21% energy savings** in this home

Energy assessment	\$500
Attic and crawl space insulation upgrade with air sealing	\$6,610
Cathedral ceiling insulation with air sealing	\$3,000
Water heater insulation	\$90
Subtotal investment	\$10,200
Qualified Energy Upgrade California incentives	\$4,000*
Subtotal #1 out-of-pocket costs	\$6,200

But the Dobbs went a step further.



Additional upgrades projected to achieve over **30% energy savings** in this home

Pool pump upgrade	\$1,600
Irrigation and other upgrades	\$1,220
Subtotal additional investment	\$2,820
Additional Energy Upgrade California incentives	\$2,000*
Subtotal #2 out-of-pocket costs	\$820
Subtotal #1 out-of-pocket costs	\$6,200
Total out-of-pocket costs	\$7,020

*Check EnergyUpgradeCA.org/LACounty for current promotion.



Sara and Thomas Dobbs, their two teenagers and Mr. Dobbs' mother live together in their 1,800-square-foot home built in 1958. They spend about \$3,900 annually for electricity and gas. Mrs. Dobbs works in an office, and Mr. Dobbs and his mother are both house-bound

as a result of illness. Their son's upstairs bedroom has always been uncomfortable, but the Dobbs didn't think there was anything they could do about it. Energy Upgrade California to the rescue!



**Energy Upgrade California
Home Energy Makeover**

1. Comprehensive Energy Assessment

To provide a complete evaluation of the Dobbs home's energy use, **Residential Energy Assessment Services (REAS)** conducted a comprehensive home energy analysis using diagnostic equipment that included a blower door. Testing showed the home was over three times as drafty as it should have been. **REAS** determined that the home needed attic and crawl space insulation, like most houses built before today's building energy codes. They also installed compact fluorescent lamps (CFLs) in several of the home's most frequently used fixtures.

2. Insulation with Air Sealing

REAS partnered with **Progressive Insulation & Windows** to upgrade the home's attic and crawl space insulation and air sealing. **Progressive** applied four-inch thick foam board insulation to the cathedral walls of the attic and **REAS** applied drywall over the foam board. All of this helped to ensure that all penetrations between the attic floor and living area ceiling were sealed. In addition, a raised platform was built on the attic floor so the family could continue to use it for storage. **Progressive** then blew cellulose insulation into

The Dobbs Home in Encino *(continued)*



The Dobbs' home in Encino



Loose fitting, poorly insulated A/C ducts



Outdoor water heater without insulation

the attic floor under the platform. The new insulation improved the energy efficiency level from R-8 to R-38 to comply with modern building energy codes.

To prevent air from leaking between the unconditioned crawl space and conditioned living space, **Progressive** also applied R-19 efficiency level insulation batts to the crawl space walls and ceiling. These combined efforts reduced the air exchange rate in the home.

REAS also replaced ventilation fans in both bathrooms with new Whispergreen units with built-in timer and moisture sensors donated by **Panasonic**. These will further assist with controlling the home's air flow and quality.

3. Heating and Cooling System

The home's heating and cooling system was just three years old, so it did not need to be replaced. However, the Dobbs' air duct return system was undersized and restricting the system's ability to operate at peak efficiency. Mrs. Dobbs arranged for the system's original installer to enlarge the air return.

In addition, an **EnTouch** programmable, touchscreen-thermostat was installed to be sure the system will operate at peak efficiency and can be adjusted to a pre-set schedule. As a result, the system doesn't operate as much when the occupants are asleep or away from home.

4. Variable-Speed Pool Pump

The Dobbs' pool pump was also upgraded with a variable-speed model provided by **Pentair**. Pool pumps are energy-using devices that are often overlooked. Variable-speed models can save up to 25% over models that are just a few years old.

Pool pumps are not covered as a part of Energy Upgrade California, but separate rebates are available for pool pump installations.



GreenPoint Rated Elements label improvements

GreenPoint rating and processing	\$1,600
Seal garage	\$1,200
CO alarms	\$50
Subtotal additional investment	\$2,850
GreenPoint Rated Elements label rebate and LA bonus	\$900
Total additional out-of-pocket	\$1,950



GreenPoint Rated Improvements

Since the Dobbs were already making energy improvements as part of Energy Upgrade California, they didn't have much further to go to get the GreenPoint Rated Elements label. **Living Green Homes** helped the Dobbs earn 45 points—well above the minimum 25 points needed for the label.

GreenPoint Rating for the Dobbs home was provided by **Living Green Homes**.

Energy Efficiency—13 points

Most of the Dobbs' energy points were achieved through the Energy Upgrade California's Advanced Upgrade Package. **Living Green Homes** suggested replacing all light bulbs with low-mercury, energy-efficient versions for extra energy points.

Water Efficiency—10 points

Living Green Homes suggested several water conserving measures that would help the Dobbs save more money on their utility bills. Following these suggestions, **REAS** wrapped an insulated blanket around the existing water heater located outside of the home. They also insulated the exposed water pipes running outside and into the crawl space.

REAS installed high-efficiency showerheads and a shower control valve. This valve turns the flow off automatically once the desired temperature is achieved and holds it until water is actually needed. The Dobbs also earned water efficiency points for their existing Energy Star washing machine.

The home's irrigation system was upgraded with a smart controller with temperature and moisture sensors donated by **Cyber-Rain**. Now the lawn is only watered when it needs it.

Indoor Air Quality—5 points

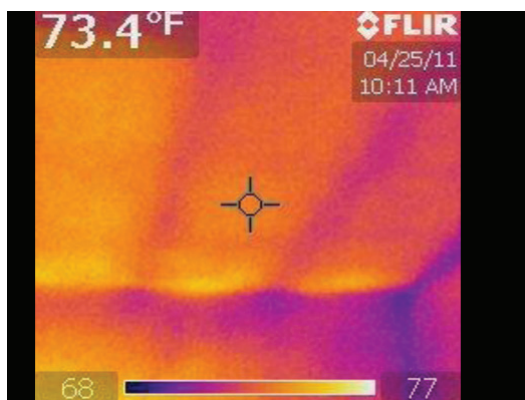
The air and duct sealing, and garage sealing work done as part of the energy efficiency upgrades vastly improved the indoor air quality in the Dobbs' home.

The home also received a new UL 2034 carbon monoxide monitor to comply with the new code, effective in California on July 1, 2011.

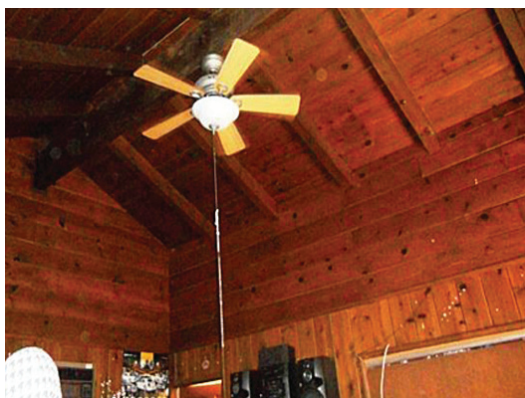
The Dobbs earned extra indoor air quality points for their existing kitchen range hood which vents directly to the outside.

Resource Efficiency—7 points

Living Green Homes made sure that all cardboard, concrete and metal waste created during the upgrade was recycled. This is a required part of the GreenPoint Rated process and saves waste from ending up in our landfills.



Ceiling and exterior wall showing orange and yellow due to lack of insulation



Exposed beam and wood ceiling without insulation and excessive air leakage

The Dobbs Home in Encino *(continued)*



Recessed lighting can be a source of air leakage

Better Communities—11 points

The Dobbs home received points for green practices already in place that help create healthier, safer communities. These include being within walking distance of public transit and other important neighborhood services, which reduces car travel and creates a more vibrant community.

GreenPoint Rated Improvements

The GreenPoint Rated label is the mark of quality for green home upgrades. It verifies that your home upgrade was installed according to proven green standards, and can even improve your property value at time of sale. When you participate in GreenPoint Rated, you earn points for improvements that save energy, water, resources and indoor air quality.

Learn about GreenPoint Rated Improvements at GreenPointRated.com.

About Energy Upgrade California in Los Angeles County

Energy Upgrade California in Los Angeles County is a rebate and incentive program for homeowners to improve their homes' energy efficiency, save water and natural resources, lower utility bills, and create a healthier and more comfortable home through a home energy upgrade. Energy Upgrade California connects homeowners with local Participating Contractors who can complete their home energy upgrade and help them apply for rebates and incentives. Learn more at EnergyUpgradeCA.org/LACounty or call 1-877-785-2237.

MAKEOVER TEAM

CONTEST HOST AND ADMINISTRATOR

Los Angeles County Team

PARTICIPATING UTILITIES

Los Angeles Department of Water & Power
Southern California Gas

OVERALL MAKEOVER WORK SCOPE COORDINATION PROVIDED BY:

Residential Energy Assessment Services
(REAS), www.reasenergy.com

COMPREHENSIVE HOME ENERGY ANALYSIS PROVIDED BY:

Residential Energy Assessment Services
(REAS), www.reasenergy.com

GREENPOINT RATING PROVIDED BY:

Living Green Homes, living-greenhomes.com

INSULATION WITH AIR SEALING INSTALLED BY:

Progressive Insulation & Windows,
www.progressiveiw.com

WATER HEATER INSULATION INSTALLED BY:

Residential Energy Assessment Services
(REAS), www.reasenergy.com

ENERGY MANAGEMENT SYSTEM PROVIDED BY:

EnTouch Controls
www.entouchcontrols.com

IRRIGATION SYSTEM PROVIDED BY:

Cyber Rain,
www.cyber-rain.com

POOL PUMP PROVIDED BY:

Pentair Water Pool and Spa,
www.pentairpool.com

INSTALLED BY:

Pools by Ben,
www.poolsbyben.com

BATH VENTILATION FANS PROVIDED BY:

Panasonic, www.panasonic.com

INSTALLED BY:

Residential Energy Assessment Services
(REAS), www.reasenergy.com